

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298



March 14, 2016

Jeff Barber
Assistant General Manager
Pasadena Water and Power (PWP)
1055 E. Colorado Blvd.
Pasadena, CA 91106

SA2015-001

SUBJECT: Audit of PWP's Substations

Dear Mr. Barber:

On behalf of the Electric Safety and Reliability Branch of the California Public Utilities Commission (CPUC), Zelalem Ewnetu of my staff conducted a substation audit of PWP November 16, 2015 to November 20, 2015. The audit included a review of PWP's records and field inspections of PWP's facilities.

During the audit, my staff identified violations of one or more General Orders (GOs). A copy of the audit findings itemizing the violations is enclosed. Please advise me no later than April 22, 2016, by electronic or hard copy, of all corrective measures taken by PWP to remedy and prevent such violations.

If you have any questions, you can contact Koko Tomassian at (213) 576-7099 or koko.tomassian@cpuc.ca.gov.

Sincerely,

A handwritten signature in blue ink that reads "Fadi Daye".

Fadi Daye, P.E.
Program and Project Supervisor
Electric Safety and Reliability Branch
Safety and Enforcement Division
California Public Utilities Commission

Enclosure: Audit Findings

Cc: Elizaveta Malashenko, Director, Safety and Enforcement Division, CPUC
Charlotte TerKeurst, Program Manager, Electric Safety and Reliability Branch, CPUC

AUDIT FINDINGS

I. Records Review

During the audit, my staff reviewed the following records:

- PWP Substation Inspection Practices
- Monthly visual inspection records for all 12 substations
- Relay testing records
- Battery testing records including load resistance and water level tests
- Dissolved gas analysis testing records
- Inspector qualifications

II. Field Inspections

The following substations were inspected during the audit:

Name	Facility Type	City
Brookside	Substation	Pasadena
TM Goodrich	Substation	Pasadena
Chester	Substation	Pasadena
Del Mar	Substation	Pasadena
Eastern	Substation	Pasadena
Fair Oaks	Substation	Pasadena
Hastings	Substation	Pasadena
RSC/RSD	Substation	Pasadena
Oak Knoll	Substation	Pasadena
Santa Anita	Substation	Pasadena
Villa	Substation	Pasadena
Wilson	Substation	Pasadena

III. Field Inspections – Undocumented Violations List

We observed the following violations during the field inspection. None of the violations were documented and/or addressed by PWP during its inspections:

GO 174, Rule 30.1, states in part:

Each Operator shall establish, update as needed, and follow an Inspection Program.

PWP's Substations Inspection Practices, Section 5.1.1, states in part:

Identified discrepancies that require immediate action are communicated to the appropriate supervisor. The remaining discrepancies found during inspections are noted on the inspection forms.

Listed below are the discrepancies identified at each substation during the audit, which were not noted on the inspection forms per PWP substation inspection requirements:

Santa Anita Substation

- Contamination on the 4kV-262 oil switch cable connection
- Vinedo 17kV circuit breaker leaking oil

Villa Substation

- Bank 1B transformer main tank leaking oil

RSC/RSD Substation

- 34-16 circuit breaker leaking oil

Fair Oaks Substation

- X-1028 oil switch elbows leaking oil
- Bank 3A – oil leaking on primary cables

Oak Knoll Substation

- Bank 3B – primary bushing leaking oil
- Vegetation strain and broken barbed wire on perimeter fence
- Uncovered hole in ground near perimeter fence

IV. Field Inspections – Documented Violations

We observed the following violations during the field inspection that were documented and/or addressed by PWP during its previous inspection:

GO 174, Rule 30.1, states in part:

Each Operator shall establish, update as needed, and follow an Inspection Program.

PWP's Substations Inspection Practices, Section 5.1.1, states in part:

Identified discrepancies that require immediate action are communicated to the appropriate supervisor. The remaining discrepancies found during inspections are noted on the inspection forms.

Listed below are the discrepancies identified at each substation during the audit, which were noted on the inspection forms per PWP substation inspection requirements:

Fair Oaks Substation

- Bank 2B – Low N2 tank